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ABSTRACT

This paper examines the possibility that returns to various personal characteristics obtained from education differ among five Spanish surname ethnic groups as well as for Blacks and non-black, non-Spanish people (Anglos). Numerous studies have found differences in the returns that Blacks and Whites obtain from education, experience, migration, and other personal characteristics. To measure these differences in return, it is now common practice to run entirely separate regressions for Blacks and Whites; especially significant for policy have been findings that Black-White earnings differences stem not only from lower Black educational attainment, but also from lower Black returns to education. The data for this study came from the 1971 Current Population Survey. It was found that in 1970 returns to education were 30 percent higher for men of Cuban and Central or South American origin than for non-Spanish, non-Black (Anglo) men, Puerto Rican men or other Spanish men. Black and Chicano men had returns of about 70 percent those of Anglo men. These differences are not explained by differences in nativity, mother tongue, years of education, or marital status. Differences in discrimination, quality of schooling, and class origin may be the causes, but data are insufficient to draw firm conclusions. (Author/JM)

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RETURNS TO EDUCATION FOR BLACKS, ANGLOS, AND FIVE SPANISH GROUPS

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ABSTRACT

In 1970 returns to education were 30 percent higher for men of Cuban and Central or South American origin than for non-Spanish, nonblack (Anglo) men, Puerto Rican men, or "Other Spanish" men. Black and Chicano men had returns of about 70 percent those of Anglo men. These differences are not explained by differences in nativity, mother tongue, age, years of education, or marital status. Differences in discrimination, quality of schooling, and class origin may be the causes, but data are insufficient to draw firm conclusions.

RETURNS TO EDUCATION FOR BLACKS, ANGLOS, AND FIVE SPANISH GROUPS

I. INTRODUCTION

Numerous studies have found differences in the returns that blacks and whites obtain from education, experience, migration, and other personal characteristics. Not only do blacks often have lower averages of valued characteristics, but they often receive less for them than do whites. To measure these differences in returns, it is now common practice not simply to run regressions with dummy variables for race, but to run entirely separate regressions for blacks and whites. In this way, the coefficients for all of the explanatory variables other than race are allowed to differ between groups. The differences in coefficients are generally interpreted as measures of market discrimination.

Especially significant for policy have been findings that black-white earnings differences stem not only from lower black educational attainment, but also from lower black returns to education. If black returns to education are low, then government programs designed to narrow black-white earnings differences by narrowing educational differences are likely to be ineffective.

This paper will examine the possibility that returns to various personal characteristics differ among five Spanish surname ethnic groups, as well as for blacks and nonblack, non-Spanish people (Anglos). Studies by Fogel (1966) and Lyle (1972) found lower earnings among Spanish groups than among Anglos, and Wong (1974) found lower earnings among some Oriental groups than among whites. Published census data from the 1970 Census of Population and the Current Population Surveys also

indicate large variations among ethnic groups in education, age, and location, as well as in earnings. Finally, Carliner (1974) found that Spanish men earn significantly less than Anglos after holding education, marital status, age, and location constant. However, no work has been done on whether personal characteristics affect earnings differently for Spanish groups than for Anglos and blacks.

The data for this study came from the 1971 Current Population Survey, which was conducted by the Census Bureau. Respondents were asked to specify their descent or origin from a list of ethnic categories including black, Mexican (Chicano), Puerto Rican, Cuban, Central or South American, Other Spanish, seven European groups, and two miscellaneous categories, "Other" and "Don't Know." All persons who did not classify themselves as black or Spanish were put in the Anglo category. Because there was no listing for nonwhites who were also nonblack, a small number of Orientals and American Indians were included with Anglos. There were also no questions in the CPS on place of birth, immigrant status, or on parents' education, occupation, or birthplace.

II. THE GROUPS

Although the five Spanish groups identified in the Current Population Survey share some elements of a common heritage and language, in many respects they are very different. By far the largest of the groups is the Chicanos, with a population of over five million. Concentrated in Arizona, Colorado, New Mexico, and especially in California and Texas, 38 percent of Chicanos over 18 were born abroad, and most of those born here are the children or grandchildren of immigrants.[1] More than 25

percent of the 1.7 million recorded immigrants from Mexico since 1820 have come here since 1960. As Table 1 indicates however, the percentage of native-born Chicanos is much higher than that of natives among most of the other Spanish groups.

In spite of their native birth, however, 47 percent of Chicanos use Spanish in their homes currently, and 72 percent did so as children. In addition to native birth and geographic distribution, an additional factor distinguishing Chicanos from the other Spanish groups is their lower-class origins. Almost 55 percent of Mexican immigrants between 1960 and 1970 gave their occupations as farmer or laborer, and an additional 17 percent were servants. Only 6 percent were professionals or managers before coming here.

In this country as well, Chicanos are near the bottom of the social structure. Median male earnings of $6193 in 1970 and median education of 8.8 years are matched only by averages for blacks and Puerto Ricans. The medians for men of all other ethnic groups are at least 30 percent higher. Only 9.2 percent of employed Chicano men over 16 are professionals or managers. The same percentage are farm laborers or foremen, and an additional 13.4 percent are nonfarm laborers. This compares with 26.2 percent professionals and managers, 3.3 percent farm workers and foremen, and 7.3 percent nonfarm laboreres among all men over 16 in 1970.

Unlike Chicanos, Puerto Ricans in the continental United States are heavily concentrated in the Northeast, with almost 70 percent living in the New York area. Almost 98 percent of them are urban, and 94 percent live in metropolitan areas. Also unlike Chicanos, only 8.8 percent

TABLE 1

Selected Characteristics By Ethnic Origin

Source	Chicanos	Puerto Ricans	Cubans	Central or South Americans	Other Spanish	Blacks	Anglos
Population (000)	5073	1454	565	556	1582	24,500	164,500
Average schooling	8.8	8.3	10.4	11.3	10.8	9.9	12.0
Average earnings (men 18-65)	$6193	$6421	$7032	$7075	$7956	$5910	$9023
Percent (18+) immigrants	62	N.A.	95	N.A.	N.A.	N.A.	N.A.
Percent Spanish mother tongue	72	83	95	69	36	N.A.	N.A.
Percent now Spanish speaking at home	52	27	12	54	83	N.A.	N.A.
Percent of immigrants who were farmers and farm laborers	55	N.A.	6.3	2.8	N.A.	N.A.	N.A.
Percent of immigrants who were professionals and managers	5.7	N.A.	29	26	N.A.	N.A.	N.A.

N.A.: Not available or not applicable.

Sources: Lines 1, 5, 6 from Current Population Report, Series P-20, No. 213. Lines 2 and 3 from C.P.S. Tabulations. Line 4 from 1970 Census of Population PC(2)-1C. Lines 7 and 8 from U.S. Immigration and Naturalization Service, Annual Reports 1960-1970, Table 8A.

of Puerto Ricans over 18 were born on the mainland, and only 27 percent cur[illegible] speak English in their homes.

[illegible]r, Puerto Ricans do not come only from the bottom of Puerto Ri[illegible]. Because they are born United States citizens, no immigration statistics are kept on their occupations in Puerto Rico. But the median years of school completed for men 25 and over in 1970 was 8.8 on the mainland and 7.5 in Puerto Rico.[2] Thus the "immigrants" are somewhat above average for Puerto Rico, but are far below average for the United States. Their earnings of $6421 are higher than those of Chicanos and blacks nationally, but in the New York SMSA their median incomes are more than 10 percent less than the median incomes of blacks.[3] Only 8.9 percent of Puerto Rican men are professionals or managers, though only 9.4 percent are farm or nonfarm laborers. The vast majority are service workers, craftsmen, and operatives.

Like Puerto Ricans, Cubans are also very concentrated geographically. Forty percent live in Miami, and an additional 26 percent live in the New York area. Over 98 percent of Cubans live in urban areas. Most of the Cubans in this country have come since 1960. Ninety-five percent of those 18 or over are foreign-born. Unlike Puerto Ricans and Chicanos, Cuban immigrants left positions of high status in their mother country. Of the Cuban immigrants between 1960 and 1970, 29 percent were professionals or managers in Cuba, and only six percent were farmers or laborers.

In the United States, individual success stories of Cubans abound, but the group as a whole still has far lower income and education than Anglos. Their $7032 in earnings and 10.4 years of school were sub-

stantially below the levels of all men. However, more than 20 percent of Cuban men were professionals and managers, and only 6.1 percent were laborers.

The Central and South Americans in this country are primarily from Ecuador, Argentina, Colombia, and Honduras. At least 64 percent of members of this group over 18 were immigrants, and 69 percent of all Central or South Americans list Spanish as their mother tongue. Currently 54 percent speak Spanish in the home. Among the immigrants who arrived between 1960 and 1970, 26 percent were professionals or managers in their home countries, and less than three percent were farmers or laborers. However, more than 15 percent were servants. Though data are not available to bear this out, it seems likely that most of the servants are women and most of the professionals and managers are men.

In this country, 20 percent of Central and South Americans claim to live in rural areas, the highest percentage for any Spanish group.[4] An additional 26 percent live in the New York SMSA and 15 percent in Los Angeles, with most of the remainder scattered in other large cities. Their median schooling of 11.3 years is only slightly lower than the schooling of all men, but their median earnings of $7075 is considerably lower. Occupational data are not available.

Because of inadequate data, the hardest group to describe is the "Other Spanish" category. The only Spanish-speaking countries not included in more specific categories of the CPS are Spain and the Dominican Republic, but together they have not sent enough people here to account for the total of "Other Spanish" respondents. Grebler et al.

(1970) have suggested that these people may be descendants of upper-class Spaniards and Mexicans already in the Southwest when this area became part of the United States. Because most Mexicans (Chicanos) are lower-class, these people might wish to identify themselves with another group, even though in fact their country of origin is the same.

In any event, 83 percent of them currently speak English in the home, and 57 percent had English, not Spanish, as their mother tongue. Sixteen percent live outside metropolitan areas, and 26 percent live in the South, including Texas. Their median earnings of $7955 is the highest of any Spanish group, but their median 10.8 years of schooling is lower than that of Central and South Americans.

The final minority group covered in this paper is blacks. Today they are widely distributed throughout the rural and urban South and the urban North and West. Although there has been virtually no immigration of blacks for the last one hundred and fifty years or more, since 1920 there has been a vast migration from the rural South to urban areas. Others have observed that, in a sense, blacks are immigrants too. In 1920, 66 percent of blacks lived in the rural South.[5] By 1970 only 17 percent remained there.

Like Chicanos, but very much unlike the other Spanish groups, blacks came from the bottom of rural Southern society. In 1920, before the migration started, 46 percent of black men were farmers or farm laborers, and 77 percent of employed black women were farm laborers, servants, or took in laundry.[6] Although the gap between the races may be narrowing, blacks still earn far less than whites. And black men are still concentrated at the bottom of the occupational ladder. Only 8.9 percent of them are professionals or managers, and 19.3 percent are laborers.

III. ANTICIPATED RESULTS

With such diversity among these groups, it is difficult to form reasonable hypotheses concerning how various factors should affect their earnings. Should we expect that the value of a year of education for these Spanish groups is close to the value for Anglos, or is it more likely to be lower, like the value received by blacks? It is frequently claimed that there is explicit racial prejudice against Chicanos. [See Grebler et al. (1970) for specifics.]

If explicit racial prejudice exists, then returns to education might be low for Chicanos. Jobs as supervisors, managers, and foremen have until very recently been restricted almost entirely to whites, and perhaps to non-Spanish whites. Poorly paid work requiring little education may be open to any worker unable to find something better--black, Chicano, or Anglo. But for occupations requiring more education, especially those involving supervision of other workers, it may be that no amount of schooling would qualify a black or brown. If this pattern of discrimination exists, then we should expect to find relatively small increases in earnings for increases in education, for Chicanos as well as for blacks.

Among the other Spanish groups, we might still expect to find small returns to education even without explicit racial or ethnic discrimination in employment. Except for the youngest age group, almost all the men in these ethnic groups received their education and early work experience outside the United States. The skills necessary to be a farm laborer, custodian, or unskilled factory worker are probably no harder to learn for a man with foreign education and work experience

than for a native. But the skills required to be a businessman or office manager may be much harder for a foreigner to acquire. And those occupations requiring special certification, such as teacher, lawyer, or doctor, may be impossible to transfer from one country to another. Thus it is possible that for various reasons all the Spanish groups have significantly lower returns to education than do Anglos.

Similarly with the effect of age on earnings, ethnic discrimination and recent immigration may result in relatively flat age-earnings profiles for Spanish groups, like that of blacks, rather than peaked like the one for whites. If discrimination against Spanish groups is important, it probably operates to prevent them from obtaining and benefiting as much as Anglos do from on-the-job training, seniority, and advancement within and across occupations.

Even if discrimination is not important, among the immigrant groups it seems plausible that younger men would make the transition to the new country more easily than older men who normally would earn more. Certainly the older men would not have higher earnings from seniority or from experience on a specific job to the same extent as would Anglos who have worked in this country all their adult lives. And perhaps like schooling, it may be difficult for older men to transfer the skills they have learned from one economy to another.

Finally, there is little reason to expect that the effect of location on earnings would differ systematically between the Spanish groups and Anglos. Although for blacks discrimination is probably stronger and earnings lower in the South, and especially in the rural South, than in other parts of the country, regional differences in the

strength of discrimination are not likely to be important for the Spanish groups. Furthermore, most of the Spanish groups are very concentrated in one or two areas, so that testing for locational differences in earnings would be quite difficult with the limited information available in the CPS.

If the reasoning above is correct, then, we might expect low education coefficients not only for blacks, but also for the Spanish groups, with or without overt ethnic discrimination. Middle-aged workers may earn more than older and younger ones, but the differences may well be smaller than differences among Anglo men. And finally, there is less reason to expect differences in earnings by location for the Spanish groups than for blacks. If discrimination does exist against the Spanish groups, it is less likely to vary by region, as it does for blacks.

IV. EDUCATION COEFFICIENTS

To test whether earnings functions differ for blacks, Anglos, and Spanish groups, seven identical regressions were run, one for each group. The dependent variable in all cases was the log of annual earnings; the independent variables were years of completed education, and dummy variables for living in the South, for living in metropolitan areas, for being married and spouse present, and for four age categories (18 to 24, 25 to 34, 35 to 44, and 45 to 54). The reference group consisted of unmarried men between 55 and 64 living outside the South and outside metropolitan areas. All women and men under 18 or over 65 were excluded from the regressions because their earnings patterns were complicated by labor force participation decisions. Also excluded were students and men with nonpositive incomes.

Table 2 presents the results of the seven regressions. Standard errors are in parentheses beneath the coefficients. The results show considerable differences among ethnic groups in several of the coefficients, not always in the expected directions. The group with the lowest education coefficient is blacks. Although the coefficient for Anglos is much higher, it is far from the highest. Both Cubans and Central or South Americans receive considerably more than Anglos for additional years of schooling, and "Other Spanish" and Puerto Ricans receive nearly as much. Only Chicanos, the largest of the Spanish groups, have a significantly lower education coefficient than Anglos, though even their coefficient is somewhat above that for blacks.

This evidence strongly refutes the hypothesis that relatively well-educated newcomers have greater difficulty transferring their skills to this country than do the less-educated. I expected that foreign schooling, foreign certification, and often severe language problems would be more of a handicap for the well-educated than for the poorly educated among Spanish groups. This does not seem to be the case. The two groups with the highest returns to education are also the two groups with the lowest percentage of native-born and among the lowest in percentages of those currently speaking English in the home.

One explanation for the unusually high returns to education experienced by Cubans, and Central and South Americans that seems plausible is a nonlinear relationship between education and earnings. Certainly the marginal effect on earnings of a high school or college diploma is greater than the completion of 11th grade or the junior year of college. Perhaps the level of distribution of education among

TABLE 2

EARNINGS REGRESSIONS BY ETHNIC GROUPS

Variable	Mexican, Chicanos	Puerto Ricans	Cubans	Central or South Americans	Other Spanish	Blacks	Anglos
Constant	7.788	7.899	8.369	7.648	7.972	7.584	7.700
Education	.049	.068	.088	.090	.064	.043	.069
	(.008)	(.017)	(.019)	(.025)	(.012)	(.005)	(.001)
MSP	.456	.074	.075	.252	.520	.408	.462
	(.071)	(.153)	(.176)	(.192)	(.104)	(.038)	(.012)
SOUTH	-.167	.030	.022	-.027	.021	-.231	-.046
	(.060)	(.397)	(.132)	(.202)	(.100)	(.036)	(.010)
SMSA	.199	-.122	-.641	-.036	.094	.328	.212
	(.064)	(.249)	(.705)	(.307)	(.116)	(.041)	(.009)
Age							
18-24	-.722	-.319	-.457	-.587	-.720	-.373	-.650
	(.132)	(.278)	(.273)	(.517)	(.170)	(.064)	(.016)
25-34	-.131	.240	-.040	-.116	-.179	-.068	-.020
	(.118)	(.268)	(.198)	(.479)	(.153)	(.056)	(.014)
35-44	-.004	.437	.146	-.009	-.052	.150	.140
	(.118)	(.268)	(.198)	(.479)	(.153)	(.056)	(.014)
45-54	-.016	.408	-.300	-.389	-.033	.134	.117
	(.121)	(.294)	(.210)	(.504)	(.162)	(.057)	(.014)
R^2	.24	.18	.21	.17	.34	.22	.27
No. Obs.	670	170	117	84	187	2303	26239

these two groups is such that a simple linear measure is artificially high because of this nonlinearity.

To test this possibility, seven additional regressions were run. They were identical to the earlier regressions except that dummy variables for 8 years of schooling, 9 to 11 years, 13 to 15 years, and 16 or more years were substituted for the continuous education measure used before. The reference category was men with less than 8 years of education. Table 3 presents the coefficients of these five dummy variables for the seven ethnic groups, with their standard errors in parentheses.

The number of observations is too small and the standard errors are too large to permit strict statistical significance. However, it is clear that the groups with large linear education coefficients also tend to have the largest spreads in dummy education coefficients. Thus the differences in education coefficients do not disappear when a nonlinear specification is used. The very large payoff to finishing college for Puerto Ricans and Cubans, and to attending college at all for Central or South Americans is especially striking. According to these results, blacks receive very little return for any education up to graduation from high school, but a large increase in earnings for finishing college.

V. BIAS FROM OMITTED VARIABLES

If length of residency in the United States, ability to speak English, and nonlinear effects of education do not explain ethnic differences in education coefficients, what does? Perhaps the answer

TABLE 3

Education Coefficients by Ethnic Group

Years of Schooling	Mexican	Puerto Rican	Cuban	Central and South American	Other Spanish	Black	All
0-7				(Reference Group)			
8	.158 (.0005)	.425 (.183)	.069 (.218)	.543 (.315)	.387 (.168)	.086 (.066)	.208 (.0208)
9-11	.199 (.0806)	.414 (.156)	.304 (.248)	.487 (.346)	.392 (.137)	.055 (.049)	.306 (.0186)
12	.519 (.0773)	.434 (.170)	.389 (.189)	.399 (.284)	.554 (.139)	.186 (.0503)	.492 (.0172)
13-15	.409 (.156)	.754 (.310)	.602 (.238)	1.022 (.393)	.737 (.162)	.269 (.0714)	.566 (.0197)
16+	.635 (.186)	1.238 (.397)	1.150 (.271)	1.183 (.312)	.677 (.167)	.665 (.0817)	.810 (.0192)

lies in differences in class background and native ability among ethnic groups. Suppose that educational attainment depends on a person's abilities, class background as measured by parents' occupational status, income, or education, and on other factors including location, age, and ethnicity.

(1) $$\text{Educ} = \alpha_o + \alpha_1 \text{Class} + \alpha_2 \text{Ability} + \Sigma\, \alpha_i y_i + u \ .$$

A completely specified earnings function should also include class background and ability, as well as education, sex, age, and other characteristics of the person. Many studies, including Blau and Duncan (1967), Duncan, Featherman, and Duncan (1972), Gintis (1971), and Morgenstern (1973), have found that class and ability affect earnings or occupational achievement directly, in addition to their indirect effect through education. Class background has especially been found to be an important determinant of earnings or occupation, education being constant.

(2) $$\log(\text{Earn}) = \beta_o + \beta_1 \text{Educ} + \beta_2 \text{Class} + \beta_3 \text{Ability} + \Sigma\, \beta_i x_i + e \ .$$

Unfortunately, most data sets, including the one used in this study, do not have any measures of class background or ability. Therefore almost all the recent studies of differences in earnings functions by ethnic group have been forced to omit these important variables. Hanoch (1967), Harrison (1972), Weiss and Williamson (1972), Weiss (1970), Welch (1973), and the other studies cited elsewhere have all estimated variants of the regression estimated above.

(3) $$\log(\text{Earn}) = \beta_o + \beta_1 \text{Educ} + \Sigma\, \beta_i x_i + e \ .$$

Since α_1, α_2, β_2, and β_3 are all positive, the effect of omitting class background and ability from the earnings function by using (3) instead

of (2) will result in substantial upward bias in the estimated coefficient of education, b_1. The size of the bias depends on the size of these four coefficients.

Griliches and Mason (1972) have shown that omitting a measure of ability, at least measures ordinarily available to researchers, is not likely to bias the education coefficient upward by more than 10 percent. However, the bias imparted by omitting class background is likely to be much larger. Studies which have had information on class background have found that its effect on educational attainment and on earnings or occupation, education constant, are both large. Therefore, b_1 will be larger than β_1, and the effect of education on earnings has probably been considerably overestimated in studies using (3) instead of (2).

This paper, and many of the other papers using misspecified earnings functions, are concerned not so much with the exact size of the effect of education on earnings, but with comparing this effect for Anglos, blacks and the five Spanish groups. If the size of the bias in b_1 were the same for all groups, it would more or less wash out in comparisons. However, there is good reason to believe that it does vary among groups. Duncan (1968) and Blau and Duncan (1967) found that the effect of class background on occupational achievement (the equivalent of β_2 using a somewhat different measure of achievement) was much larger for whites than for blacks, holding other factors constant.

If these differences exist between whites and blacks, they may also exist among Anglos, Chicanos, Puerto Ricans, and Cubans. The effect of ethnic discrimination against these groups may also be to lower not only β_o and β_1 in equation (2), but also β_2. That is, earnings may be lower

for Chicanos and Puerto Ricans not only by the pure discrimination effect as measured by differences in the education coefficient. Discrimination may also have the effect of lowering returns to class background.

If this is so, and equation (3) rather than equation (2) is estimated, then the bias in b_1 would be <u>less</u> for Chicanos, Puerto Ricans, and blacks than for the other groups. Because the bias depends on the size of β_2, their estimates of b_1 would be more accurate than the estimates for groups that do not suffer this form of discrimination. Thus differences in the b_1's may be larger than the differences in the β_1's, since what seem to be returns to education for whites may actually be no more than higher returns to class background.

A further source of differences in the bias of b_1 among different ethnic groups may arise from a nonlinear relation among education, class background, and earnings. Hauser (1972) found that the effect of education on earnings is higher, the higher the class background of the individual. Although he used a different estimation technique, this presumably means that if equation (2) were run separately for different classes, the estimates of β_1 would be higher for people from higher class backgrounds. Thus, if measures of class background are omitted from earnings functions, or if the functional form used to estimate the relation does not allow for nonlinear interactions, estimates of the education coefficient may be biased. Since the size of the bias depends on the average class background, it will differ among ethnic groups. While some of the ethnic differences in education coefficients may be real, some may simply be differences in this bias.

Unfortunately, testing this possibility for Spanish groups cannot be done with existing data. To see whether class differences account for different returns to education requires information on the class background of individuals, not simply of groups. Only when these data are available will we know how effective education is for all classes of the various minority groups.

VI. OTHER RESULTS

Differences among ethnic groups in coefficients other than education were also somewhat surprising. Hanoch (1967) and others found the earnings difference between middle-aged white workers and older and younger white workers to be larger than comparable differences among black workers. This has been interpreted as an indication that blacks benefit less from on-the-job training and seniority than whites. I anticipated that the "age hill" for Spanish groups might be similar to that of blacks, either becaue of discrimination or recent immigration.

The present results based on 1971 data rather than 1960 or 1967 surveys suggest that the pattern may be changing. The age hill of earnings among blacks in Table 2 is almost as steep as among Anglos. Although the relative earnings of the youngest age group, men 18 to 24, was much lower among whites than among blacks, the pattern of relative earnings for the other age groups was virtually the same. The coefficients for the youngest group may be suspect since the regressions excluded students. Since many more whites attend college than do blacks, white nonstudents under 25 may be less representative of all white men that age than are black nonstudents of all black men that age.

Even more surprising were the results for three of the Spanish groups, Chicanos, Central and South Americans, and Other Spanish. Among these groups, earnings reached a peak with the oldest age group, men 55 to 64. Similar patterns occur among the highest educational and occupational groups in the population, but not in the jobs at which most of these Spanish men work. It is far from obvious why these Spanish groups should have such an age-earnings pattern. However, in all cases the samples were too small for reliable estimates, and the age coefficients, though often large, were generally not significantly different from one another.

There was also wide variation in the other coefficients of the earnings regression, both among the Spanish groups and between them and Anglos and blacks. The effect of being married, for instance, was similar for Anglos, blacks, Chicanos, and "Other Spanish," about half as important for Central or South Americans, and quite unimportant for Cubans and Puerto Ricans. There was no correlation between the effect of being married and the percentage of married men in each group. Anglos had among the highest percentage married, with about 80 percent married, and blacks among the lowest, with 71 percent married. Cubans had the highest percentage married, 83 percent, and the lowest coefficient, while Central and South Americans had the lowest percentage married, 69 percent, and a marriage coefficient about in the middle.

The effect of living in a metropolitan area also varied considerably, from very large and positive for blacks, to large and negative for Cubans. However, almost all members of the three Spanish groups in the Current Population Survey with negative coefficients on SMSA lived in metropolitan

areas. Only one Cuban, eight Central and South Americans, and ten Puerto Ricans in the sample used here actually lived outside SMSA's. The coefficients for these groups were not significant, and should not be taken seriously.

VII. CONCLUSIONS

The results of this paper indicate that not only earnings and education but also returns to education vary substantially among ethnic groups. The lowest returns were obtained by blacks, far lower than the rate for Anglos. Chicanos fared only slightly better than blacks, with an education coefficient only 71 percent of the Anglo coefficient. However, "Other Spanish" and Puerto Ricans had virtually the same return to education as Anglos, and Cubans and Central and South Americans did considerably better. Their coefficients were about 30 percent larger than the Anglo coefficient.

As with blacks, it is unclear whether the low return to education for Chicanos is the result of explicit ethnic discrimination, or the result of lower quality education, inability to speak English, or recent immigration. This question has not been resolved for blacks, in spite of extensive studies over many years. While not conclusive, the evidence presented here does raise strong suspicions that labor market discrimination keeps Chicanos out of high status, high income jobs just as it has kept blacks down.

Several writers have suggested that differences in the quality of education explain some of the differences in returns to schooling between blacks and whites. This may also be true for Chicano-Anglo differences,

though the extreme forms of discrimination against blacks, as reported in Welch (1973), certainly never existed against Chicanos. It is also possible that the quality of schools in prerevolutionary Havana, Quito, and Buenos Aires was substantially higher than the average schools attended by Anglos in the U.S., though this is considerably harder to believe. In any event, there are no data to support these hypotheses.

Language and nativity do not help to explain differences in returns to education among the Spanish groups. The group with the highest percent English mother tongue or English now spoken in the home is the Other Spanish. Their education coefficient is a little below that of Anglos. The group with the lowest use of English, Cubans, has the second highest rate of return. As with nativity, Cubans have the smallest percentage of native born, while "Other Spanish" and Chicanos, with much lower rates of return to education, have much higher percentages. If difficulties with English actually prevent Chicanos from benefiting as much as Anglos from education, why should this not be an obstacle for Cubans as well? If foreign birth does not prevent Cubans from transferring educational credentials or skills from abroad, then why should it do so for the much smaller percentage of foreign-born Chicanos?

The most likely explanation for differences among ethnic groups in returns to educations is differences in class background. The most important difference between the Spanish groups with high education coefficients and groups with low coefficients is the upper-class and middle-class backgrounds of the former and the working-class and peasant backgrounds of the latter. The Cubans and Central or South Americans in this country were often professionals and managers in their native

countries, and were rarely farmers or laborers. The parents of Chicanos and blacks, on the other hand, were usually laborers, small farmers, and servants. The groups with education coefficients between the extremes, Puerto Ricans and Anglos, came from all levels of their societies. No information is available on the class background of Other Spanish.

If education does in fact benefit men from higher-class backgrounds more than men from lower-class backgrounds, then these differences in origin among ethnic groups may explain the differences in rates of return to education. Omitting measures of class background from the earnings regression may lead to differences in the estimate of the education coefficient. If this hypothesis is correct, then the earnings regressions presented here for Spanish groups and elsewhere for whites and blacks may overestimate the effect of education on the earnings of groups with higher-class backgrounds. What appears to be the effect of education may actually be the effect of class and education together. Further research with better data sets on the interactions between class, education, ethnicity, and earnings is definitely required.

NOTES

[1]See Table 1 for sources for this and other uncited statistics. Unless otherwise specified, all publications are by the U.S. Bureau of the Census. See also Persons of Spanish Origin (1970) PC(2)-1C, Tables 1 and 13 for location data.

[2]1970 Census of Population, vol. I, part 53, table 45, p. 198, and Puerto Ricans in the United States (1970) PC(2)-1E, table 3, p. 32.

[3]Ibid., table 19, and Negro Population (1970) PC(2)-1B, table 13.

[4]"Some respondents apparently misunderstood the question and interpreted the category 'Central or South American' to mean central or southern United States." Persons of Spanish Origin, P. IX.

[5]1920 Census of Population, vol. II, table 20, pp. 79-80.

[6]Ibid., vol. IV, table 5, pp. 343-59.

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